

ABSTRACT OF THE DISCLOSURE

Carrier signals are modulated by information (e.g., television) signals in a particular frequency range. The information signals are oversampled at a first frequency greater than any of the frequencies in the particular frequency range to provide digital signals at a second frequency. The digital signals are introduced to a carrier recovery loop which provides a feedback to regulate the frequency of the digital signals at the second frequency. The digital signals are introduced to a symbol recovery loop which provides a feedback to maintain the time for the production of the digital signals in the middle of the data signals. The gain of the digital signals is also regulated in a feedback loop. The digital signals are processed to recover the data in the data signals. By providing digital feedbacks, the information recovered from the digital signals can be quite precise. In one embodiment, the carrier signals are demodulated to produce baseband inphase and quadrature signals. The inphase and quadrature signals are then oversampled and regulated in the feedback loops as described above. In a second embodiment, the carrier signals are downconverted to produce intermediate frequency signals which are oversampled to produce the digital signals at the second frequency without producing the inphase and quadrature signals. The oversampled signals are then regulated in the feedback loops as described above. In a third embodiment, the carrier signals are oversampled without being downconverted and without producing the inphase and quadrature signals.